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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/530,579	08/29/2000	Jonas Malmkvist	2867-0185-2	3577

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EXAMINER

WANG, LIANG CHE A

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 04/24/2003

11

Please find below and/or attached an Office communication concerning this application or proceeding.

OK

Office Action Summary

Application No.

09/530,579

Applicant(s)

MALMKVIST ET AL.

S

Examiner

Liang-che Alex Wang

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 28 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner:
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 2155

DETAILED ACTION

1. Claims 8-14 remain for examination.
2. The text of those sections of Title 35, US Code not included in this section can be found in a prior Office Action.

Specification

3. The disclosure is objected to because of the following informalities:
 - a. In the substitute specification, Page 3 lines 23, "receiver 105" is objected because item 105 is having arrow going outward on Figure 1, therefore should be named as "transmitter 105" as indicated on page 4 lines 15 and 21.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 8-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Referring to claim 8, claim 8 page 2 lines 2-3 recites the limitation "when a **downstream node the another network** is unable to maintain a predetermined transmission quality for the specific data stream;" "**a downstream node the another network**" renders the claim indefinite. The Examiner would view the sentence as "when a **downstream node**

Art Unit: 2155

is unable to maintain a predetermined transmission quality for the specific data stream;”
for further examination.

7. Referring to claim 9, claim 9 lines 3-5 recites the limitation “when **the downstream node the another network** is once again to maintain a predetermined transmission quality for the specific data stream;” “**the downstream node the another network**” renders the claim indefinite. The Examiner would view the sentence as “when **the downstream node** is unable to maintain a predetermined transmission quality for the specific data stream;” for further examination.
8. All dependent claims are rejected to as having the same deficiencies as the claims they depend from.

Claim Rejections - 35 USC § 103

9. Claims 8-11, 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang, US Patent Number 6,058,113, hereinafter Chang in views of Crisler et al. US Patent Number 5,481,537 hereinafter Crisler.
10. Referring to claim 8, Chang has taught a data and telecommunications transmission method (see title) configured to transmit a plurality of data streams between a receiving terminal (item 36, figure 1) and a transmitting terminal (item 32, figure 1) via at least one fixed network (item 31, figure 1), and the fixed network being controlled by resource reservation protocol (Col 8 lines 51-54 and item 52), the method comprising:

 updating a specific resource reservation corresponding to a specific data stream

 (Col 8 lines 57-60, when the reservation of resource are refreshed, the resource

reservation is being updated) at an upstream node in the fixed network when a downstream node is unable to maintain a predetermined transmission quality for the specific data stream (Col 8 lines 59-60, the refresh is made based on the data traffic flowing through each nodes, and a predetermined transmission quality could be the transmission quality (let's call it "transmission quality A") before resource reservation is refreshed) ;

shunting temporarily the specific data stream at the upstream node (Col 8 lines 57-60, "transmission quality A" is no longer the transmission quality in the system because after the refresh, other transmission quality is taking place, therefore the specific data is shunted. But since the system will refresh again, and it is possible "transmission quality A" will be refreshed back again to serve the system, therefore the shunting of the specific data stream could be temporarily); and

utilizing temporarily the specific resource reservation at the upstream node for other traffic (Col 8 lines 57-60, the resource reservation is refreshed based on the data traffic, therefore the new transmission quality is provided particularly for the data traffic, and the resource reservation refreshes when the data traffic changes, therefore the resource reservation is utilized for other traffic. And because as mentioned previously the system will refresh again, and it is possible "transmission quality A" will be refreshed back again to serve the system, therefore this utilization could be temporarily) while still maintaining the correspondence of the specific resource reservation and the specific data stream for future reactivation (Col 8 lines 57-60).

However, Chang has not explicitly taught there is another network comprising links with variable bandwidth and quality between the transmitting and receiving terminals.

Crisler has taught a radio network (see Figure 1) comprising of links with variable bandwidth and quality (Col 1 lines 26-61, channel bandwidth and quality inherently exist in a radio wireless network.), at which a resource reservation protocol reserves resources for data streams (Col 2, lines 33-42)

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to modify the teaching of Chang to include another network comprising links with variable bandwidth and quality between the transmitting and receiving terminals.

A person with ordinary skill in the art would have been motivated to make such change because Chang stated the communication devices (transmitter and receiver) are preferably computer-based devices (Col 3 lines 14-19), and it is conventionally known that link 35 in Chang's Figure 1 could be any kinds of connection that enable the communications between item 31 and item 32, including radio wireless network. And Crisler described resource reservation protocol reserves resources for data streams through a radio wireless network. (Figure 1 and Col 2 lines 33-42)

11. Referring to claim 9, Chang has further taught the method of claim 8 further comprising:

updating the specific resource reservation corresponding to the specific data stream at the upstream node in the fixed network when the downstream node is once

Art Unit: 2155

again able to maintain the predetermined transmission quality for the specific data stream (Col 11 lines 3-31 and rejection to claim 8);

canceling the shunting of the specific data stream at the upstream node (Col 11 lines 3-31, and rejection to claim 8, if the resource reservation is once again refreshed back to the predetermined transmission quality, then we can say the previous shunting is canceled); and

utilizing the specific resource reservation at the upstream node for the specific data stream (Col 11 lines 3-31 and rejection to claim 8);

12. Referring to claim 10, Chang in views of Crisler has taught an invention as described in claim 8, and Crisler has taught said another network is a radio network including a radio channel (see Figure 1).

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to modify the teaching of Chang to include a radio network including a radio channel.

A person with ordinary skill in the art would have been motivated to make such change because Change stated the communication devices (transmitter and receiver) are preferably computer-based devices (Col 3 lines 14-19), and it is conventionally known that link 35 in Chang's Figure 1 could be any kinds of connection that enable the communications between item 31 and item 32, including radio wireless network. And Crisler described resource reservation protocol reserves resources for data streams through a radio wireless network (Figure 1 and Col 2 lines 33-42.)

13. Referring to claim 11, Chang has further taught using an interface between the downstream node and the radio channel to set a limit regarding a total number of data streams that can be transmitted from the transmitting terminal to the receiving terminal (Col 4 lines 54-63, and Chang in views of Crisler have disclosed that the link between the node 34D and the receiving device 36D could be a radio network in previous paragraphs.)
14. Referring to claim 13, Chang has further taught controlling the temporary reallocation of resources in the fixed network so that, when multicast traffic is being transmitted (figure 1, multiple receiving terminals for multicasting), the specific data stream in the upstream node is shunted without affecting other receiving terminals of the multicast traffic (Col 8, lines 57-60, this feature is inherently exist, because once the reservation refreshes, the said specific data stream is shunted, and the new data stream is taking over without affect other traffic.)
15. Referring to claim 14, Chang has further taught wherein said using an interface comprises: receiving and processing momentary information about a transmission capacity of the radio channel, (Col 8 lines 57- Col 9 line 2.)
16. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in views of Crisler and in further views of Jon Crowcroft, "*Hierarchical Coding*," *Hypertext* <http://www.cs.ucl.ac.uk/staff/j.crowcroft/mmbook/book/node119.html>, herein after Crowcroft. Chang in views of Crisler has taught an invention as described in claim 8, and Chang in views of Crisler have not explicitly taught the method of using hierarchical coding to prioritize the plurality of data streams.

Art Unit: 2155

However, Crowcroft has disclosed that hierarchical coding is ideal for transmission over packet switched networks where the network resources are shared between many traffic streams and delays, losses and errors are expected. (Hierarchical Coding, lines 1-5)

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to modify the teaching of Chang and Crisler to have the method utilized at hierarchical coding of said data streams.

A person with ordinary skill in the art would have been motivated to make such change because the environment of Chang's invention is a network where the resources are shared between many traffic streams (col 2 lines 15-44), which is the same environment that Crowcroft has disclosed to implement hierarchical coding, (Crowcroft, Hierarchical Coding, lines 1-5.)

Response to Arguments

17. The rejections are respectfully maintained and incorporated by reference as set forth in the last office action, paper number 8, mailed 01/15/2003.

18. Applicant's arguments filed 03/28/2003, paper number 10, have been fully considered but they are not persuasive.

19. In that remarks, applicant's argues in substance:

- a. That: Chang does not disclose temporarily shunting a specific data stream at an upstream node and temporarily utilizing the specific resource reservation at the upstream node assigned to the specific data stream for other traffic while still

maintaining the correspondence of the specific resource reservation and the specific data stream for future reactivation.

This is not found persuasive because in Chang, Col 8 lines 59-60, the Resource Reservation refresh is made based on the data traffic flowing through each nodes, and a predetermined transmission quality could be the transmission quality (let's call it "transmission quality A") before resource reservation is refreshed. After the refresh, "transmission quality A" is no longer the transmission quality in the system because other transmission quality "transmission quality B" is taking place in the system. ("transmission quality B" is the transmission quality after the refresh), therefore the specific data stream is considered shunted. But since the system will refresh again, and it is possible "transmission quality A" will be refreshed back again to serve the system, therefore the shunting of the specific data stream could be temporarily.

Chang disclosed the resource reservation is refreshed based on the data traffic, therefore the new transmission quality is provided particularly for the data traffic, and the resource reservation refreshes when the data traffic changes, therefore the resource reservation is utilized for other traffic (data traffic changed is then considered other traffic). And, as mentioned previously the system will refresh again, and it is possible "transmission quality A" will be refreshed back again to serve the system, therefore this utilization could be temporarily and the correspondence of the specific resource reservation and the specific data stream is maintained for future reactivation.

Art Unit: 2155

- b. That: Crisler and Crowcroft references do not cure the deficiencies of Chang.

This is not found persuasive because it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Taniguchi, US Patent Number 6,067,383, has taught a method using hierarchical coding to prioritize the plurality of data streams (see abstract).
21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

Art Unit: 2155

advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

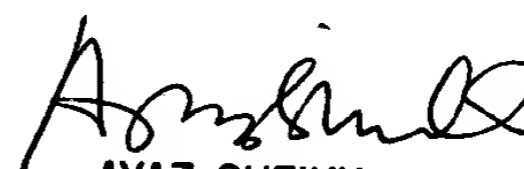
22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Liang-che Alex Wang whose telephone number is (703) 305-8159. The examiner can normally be reached on Monday thru Friday, 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R Sheikh can be reached on (703) 305-9648. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9000.

Liang-che Wang
April 16th, 2003

LCW



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